WHAT IS CLAIMED IS:

CLAIMS

1. A method of protecting a protected link including:

connecting traffic from a service module to a first physical module having a link layer framer that is connected to a protected egress link,

connecting the traffic through the first physical module through a pooling switch to a second physical module that is connected to an alternate egress link.

2. A method of protecting a protected link as in claim 1 wherein the first physical module contains an optical link interface module.

3. A method of protecting a protected link as in claim 1 wherein the second physical module contains an optical link interface module.

4. A method of protecting a protected link as in claim 1 wherein the first physical module contains an electrical link interface module.

5. A method of protecting a protected link as in claim 1 wherein the second physical module contains an electrical link interface module.

6. A method of protecting a protected link as in claim 1 wherein the first physical module contains a module that places the traffic in proper form for a pooling switch.

7. A method of protecting a protected link as in claim 1 wherein the second physical module contains a module that places the traffic in proper form for a pooling switch.

8. A method of protecting a protected link as in claim 1 wherein the traffic through the protected egress link and the protecting egress link have a synchronization difference smaller than 50ms.

9. A method of protecting a protected link as in claim 1 wherein the traffic through the protected egress link and the protecting egress link behave in a manner to the user as if there is no synchronization difference between the two traffic flows.

10. A method of protecting a protected link as in claim 1 wherein the pooling switch enables multiple logical streams to be included in one physical interface.

11. A method of protecting a protected link as in claim 1 wherein the pooling switch is a packet switch.

12. A method of protecting a protected link as in claim 1 wherein pooling switch is a time division multiplexing switch.

13. A method of protecting a protected link including:

connecting traffic from a service module to a first physical module having a link layer framer that is connected to a protected ingress link,

connecting the traffic through the first physical module through a pooling switch to a second physical module that is connected to an alternate ingress link.

14. A method of protecting a protected link as in claim 13 wherein the service module decides from information within the input traffic stream where to output the traffic stream.

15. A method of protecting a protected link as in claim 13 wherein the first physical module contains an optical link interface module.

16. A method of protecting a protected link as in claim 13 wherein the second physical module contains an optical link interface module.

17. A method of protecting a protected link as in claim 13 wherein the first physical module contains an electrical link interface module.

18. A method of protecting a protected link as in claim 13 wherein the second physical module contains an electrical link interface module.

19. A method of protecting a protected link as in claim 13 wherein the first physical module contains a module that places the traffic in proper form for a pooling switch.

20. A method of protecting a protected link as in claim 13 wherein the second physical module contains a module that places the traffic in proper form for a pooling switch.

21. A method of protecting a protected link as in claim 13 wherein the traffic through the protected ingress link and the protecting ingress link have a synchronization difference smaller than 50ms.

22. A method of protecting a protected link as in claim 13 wherein the traffic through the protected ingress link and the protecting ingress link behave in a manner to the user as if there is no synchronization difference between the two traffic flows.

23. A method of protecting a protected link as in claim 13 wherein the pooling switch enables multiple logical streams to be included in one physical interface.

24. A method of protecting a protected link as in claim 13 wherein the pooling switch is a packet switch.

25. A method of protecting a protected link as in claim 13 wherein pooling switch is a time division multiplexing switch.

26. A method of protecting a protected link including:

connecting traffic from a service module to a first pooling switch,

connecting the first pooling switch to a first physical module having a link layer framer that is connected to the protected egress link,

connecting the traffic through the first physical module through a second pooling switch to a second physical module that is connected to an alternate egress link.

27. A method of protecting a protected link including:

connecting traffic from a service module to a first pooling switch,

connecting the first pooling switch to a first physical module having a link layer framer that is connected to the protected ingress link,

connecting the traffic through the first physical module through a second pooling switch to a second physical module that is connected to an alternate ingress link.

28. A method of protecting a protected link including:

connecting traffic from a service module to a first pooling switch,

connecting the first pooling switch to a first physical module having a link layer framer,

connecting the traffic through the first physical module through a second pooling switch to a second physical module that is connected to the protected egress link,

connecting the traffic through the first physical module through the second pooling switch to a third physical module that is connected to an alternate egress link.

29. A method of protecting a protected link as in claim 28 wherein the third physical module does not include a link interface module.

30. A method of protecting a protected link as in claim 28 wherein 1:N protection is provided.

31. A method of protecting a protected link including:

connecting traffic from a service module to a first pooling switch,

connecting the first pooling switch to a first physical module having a link layer framer,

connecting the traffic through the first physical module through a second pooling switch to a second physical module that is connected to the protected ingress link,

connecting the traffic through the first physical module through the second pooling switch to a third physical module that is connected to an alternate ingress link.

32. A method of protecting a protected link as in claim 31 wherein the third physical module does not include a link interface module.

33. A method of protecting a protected link as in claim 31 wherein 1:N protection is provided.

34. A device for switching traffic comprising:

A first pooling switch configured to be connected to a physical module,

A link layer frame module connected to the first pooling switch,

A second pooling switch connected to the link layer frame module, and

A service module connected to the second pooling switch.